REMARKS

The Applicant has now had an opportunity to carefully consider the comments set forth in the 13th Office Action to be issued in this application, which was mailed August 20, 2008. The acknowledgement of the persuasiveness of the arguments presented in Applicant's Amendment L, which was filed on June 4, 2008 that is implied by the rejection of the claims according to new grounds and the recognition of allowable subject matter in **claims 7** and **8** is noted with appreciation. Nevertheless, all of the rejections are respectfully traversed.

Reexamination and reconsideration of the application are respectfully requested.

The Office Action

In the Office Action that was mailed August 20, 2008:

claims 7 and **8** were allowed;

claims 2, 4, 5, 10-13, 18 and **20-28** were rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,963,205 to Sotomayor ("Sotomayor") in view of U.S. Patent No. 5,159,667 to Borrey et al. ("Borrey");

claim 6 was rejected under 35 USC §103(a) as being unpatentable over Sotomayor in view of Borrey and further in view of U.S. Patent No. 5,276,616 to Kuga et al. ("Kuga");

claims 15 and **16** were rejected under 35 USC §103(a) as being unpatentable over Sotomayor in view of Borrey and further in view of U.S. Patent No. 4,903,229 to Schmidt et al. ("Schmidt"); and

claim 17 was rejected under 35 USC §103(a) as being unpatentable in view of a combination of **four** documents including Sotomayor, Borrey, Schmidt and U.S. Patent No. 6,064,397 to Herregods et al. ("Herregods").

The Present Application

Briefly, the present application is directed to systems and methods for automatic and semi-automatic document indexing of scanned documents. They are useful where a large document is scanned to generate an electronic version of the document. For example, a review of the document may indicate that chapter headings in the document

are rendered in an 18-point font size at a location that is centered horizontally on a page and is two inches from the top of the page. In that case, **a first sub-section delimiter** may be defined as any text located two inches from the top of a page and rendered in 18-point font size. Subheadings in the exemplary document might occur anywhere on a page but are rendered in a 16-point font size with underlined characters. Therefore, **a second sub-section delimiter** for the document might be defined as underlined 16-point text.

Once one or more sub-section delimiters are defined (e.g., by a document processor user), the electronic version of the document is searched to find occurrences of text **corresponding to** the sub-section delimiters. Information regarding each occurrence is used to create an index or table of contents for the document.

The Cited Documents

In stark contrast, the primary reference of the Office Action to **Sotomayor** is unrelated to providing an index for a document that has to be scanned in order to create an electronic version. Instead, Sotomayor discusses aspects of a word processor and the **much simpler problem** of automatically identifying key topics and phrases in the text of a document **that is being created in the word processor program**. Sotomayor discusses the use of tokens. However, the tokens of Sotomayor are to allow a web browser to use these tokens to format the displayed text for the particular display device of a particular viewer (column 6, lines 5-9). Even if Sotomayor discusses a system of automatic index creation that uses these tokens for the purpose of index creation, Sotomayor does not disclose or suggest a user designating identifying, indicating, selecting, these tokens for use as a delimiter or generating, building or designating a delimiter definition that includes such tokens. The system of Sotomayor is silent with regard to the user or document processing system operator defining a delimiter. The use of tokens in the system of Sotomayor is beyond the control of the user.

It is respectfully submitted that the secondary documents do not cure the deficiencies of Sotomayor.

For example, newly cited **Borrey** allegedly discusses a method for automatic identification of scanned documents. Borrey teaches away from the methods of the

present application by outlining alleged problems with OCR techniques <u>and</u> <u>emphasizing that the method of Borrey determines the type of information contained in</u> <u>a document</u> **without using OCR** techniques (Abstract, column 1, lines 61-64; column 2, lines 30-33; column 4, lines 33-36).

<u>Additionally, Borrey teaches away</u> from the techniques of the present application, which include a **<u>user</u>** indicating at least one of a font size, font style, text string, etc. in the determination of a sub-section delimiter by indicating that the process of Borrey is carried out without any human intervention (column 4, lines 33-36).

Still further, it is noted that <u>Borrey teaches away from</u> determining a sub-section delimiter comprising a user placing a predetermined machine-readable symbol representing a demarcation point on a printed version of the document, as recited, for example, in **claim 2** and **claim 20** of the present application by emphasizing that the identification process of Borrey is carried out <u>without using any special identification</u> <u>markings on the document</u> (column 4, lines 33-36).

Additionally, it is noted that the Office Action stipulates that Sotomayor fails to disclose determining a sub-section delimiter comprises **a user** indicating at least one of a font size, font style, text string, text location description, and a specific point coordinate within the document or wherein determining a sub-section delimiter comprises a user placing a predetermined machine-readable sub-symbol representing a demarcation point on a printed version of the document as a sub-section delimiter and appears to rely on Borrey for this disclosure. However, as indicated above, <u>Borrey</u> <u>specifically teaches away from human intervention and special identification marks on a</u> <u>document </u>(column 4, lines 33-36). Further in this regard, it is noted that, while pages 3 and 4 of the Office Action assert that Borrey discloses a number of things, the Office Action does not allege that any of those things disclose or suggest a user indicating the elements that the Office Action stipulates Sotomayor fails to disclose.

Additionally, it is noted that while the methods and systems of the present application are directed toward generating indexes or tables of contents <u>for long</u> <u>cumbersome documents</u>, **Borrey limits the use** of methods and systems disclosed by Borrey to documents <u>of only one page</u> (column 7, lines 67-68). Accordingly, it is respectfully submitted that one of ordinary skill in the art seeking to address the

problems identified and addressed by the subject matter of the present application would not look to Borrey.

Kuga allegedly discloses a system for creating an index of textual data. In the system, a dictionary stores sets of specialized words particular to a field of knowledge related to the textual data. An entry selecting module selects as index entries only those strings which match one of those specialized words and notes the locations of each occurrence of each index entry in the text. A printer outputs the selected index entries together with their occurrence positions (Abstract).

Schmidt discloses a forms generating and information retrieval apparatus comprising a compact disc for storing machine readably a plurality of form files and magnetic media for storing machine readably a plurality of information files. Schmidt is unconcerned with generating an index for a document.

Herregods discloses a method for creating multiple documents having identical background regions and page-specific information regions. Herregods is unconcerned with generating an index or a table of contents for a document.

The Claims Are Not Obvious

Claims 2, 4, 5, 10-13, 18 and **20-28** were rejected under 35 USC §103(a) as being unpatentable over Sotomayer in view of Borrey.

With regard to **claims 2, 4, 5** and **22-27**, the Office Action stipulates that Sotomayor fails to disclose determining a sub-section delimiter definition including at least one delimiter characteristic, wherein determining a sub-section delimiter comprises **a user** indicating at least one of a font size, a font style, a text string, a text location description, and a specific point coordinate within the document or wherein determining a sub-section delimiter comprises a user placing a predetermined machine-readable symbol representing a demarcation point on a printed version of the document as a sub-section delimiter. **In this regard, the Office Action appears to rely on Borrey.** However, **the Office Action does not assert that Borrey discloses this subject matter**.

Accordingly, **the Office has not met its burden of presenting a *prima facie* case of obviousness**.

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The subject matter that the Office Action stipulates is not disclosed by Sotomayor is recited in **claim 2**. Accordingly, **claim 2**, as well as **claims 4-6** and **claim 21**, which depend therefrom, is not anticipated and is not obvious in light of Sotomayor and Borrey.

Additionally, <u>Borrey **teaches away**</u> from <u>a user indicating</u> elements of a sub-section delimiter and particularly teaches away from using special identification markings on a document (column 4, lines 33-36). Accordingly, it is respectfully submitted that Borrey **teaches away** from a method of or system for automatically generating an index wherein determining a sub-section delimiter comprises **a user** indicating at least one of <u>a font size</u>, <u>a font style</u>, <u>a text string</u>, <u>a text location description</u>, <u>and a specific point coordinate</u> within the document or wherein determining a sub-section delimiter comprises a user placing a predetermined machine-readable symbol representing a demarcation point on a printed version of the document as the sub-section delimiter. Accordingly, **claim 2** is not obvious in light of Sotomayor and Borrey.

The Office Action asserts that Borrey discloses a system operator selecting retrieval criteria to search a database for records corresponding to the search criteria. It's not entirely clear why the Office Action makes this assertion. However, it is noted that disclosure of <u>using</u> an index **does not disclose** or suggest <u>a method for **creating**</u> **or** generating <u>the index</u>.

Additionally, there is no motivation in the art for combining subject matter from Borrey with subject matter from Sotomayor. <u>The methods of Sotomayor are not combinable with the methods of Borrey.</u> For example, Sotomayor relies on HTML heading tokens (column 6, lines 7-10). It is respectfully submitted that Borrey does not disclose providing such HTML heading tokens for a scanned document. Accordingly, the method of Borrey and the method of Sotomayor are not combinable. Accordingly, the assertion of the Office Action that it would have been obvious at the time the invention was made to integrate the teachings of Borrey to the teachings of Sotomayor to facilitate a retrieval of a document, words or section is specious and **the Office has not met its burden** of presenting a *prima facie* case of obviousness.

For at least the foregoing reasons, **claim 2**, as well as **claims 4-6** and **claim 21**, which depend therefrom, is not anticipated and is not obvious in light of Sotomayor and

Borrey.

Claim 5 recites *inter alia*: "performing one of optical character recognition functions and document recognition functions on the scan data to generate an electronic version of the document."

It is respectfully submitted that the Office Action does not address this subject matter from **claim 5**. Accordingly, in this regard, the rejections of **claims 2, 4, 5** and **22-27** represent an improper omnibus-type rejection (MPEP §707.07(d)). As used in the present application, optical character recognition (OCR) and document recognition (DR) are used interchangeably and refer to a process whereby document raster data is processed through an optical character recognition or document recognition function to generate a text, text location, object, an object and object location description of the document (page 6, lines 8-18 of the present application). As stipulated on page 7 (first three lines) of the Office Action, Sotomayor fails to disclose scanning the document to generate scanned document data and performing recognition functions on the scanned document data to generate a recognized version of the document. Borrey emphasizes the fact that the methods and systems of Borrey are accomplished **without** using OCR techniques (Abstract, lines 9-10; column 1, lines 61-63; column 2, lines 30-33; column 4, lines 33-36).

Accordingly, Sotomayor and Borrey do not disclose or suggest the subject matter of **claim 5**, which includes performing one of optical character recognition functions and document recognition functions on scan data to generate an electronic version of the document.

For at least the foregoing additional reason, **claim 5** is not anticipated and is not obvious in light of Sotomayor and Borrey.

Claim 22 recites *inter alia*: "a method operative to automatically generate an index for a document, the method comprising: determining a sub-section delimiter definition including at least one delimiter characteristic, wherein determining the sub-section delimiter comprises **a user** indicating at least one of a font size and a font style.

The Office Action stipulates that Sotomayor fails to disclose determining a sub-section delimiter as recited in **claim 22**. The Office Action does not even assert that Borrey discloses determining a sub-section delimiter comprises a user indicating at

least one of a font size and a font style. Additionally, <u>Borrey asserts that Borrey</u> <u>discloses an identification process that is carried out **without any human intervention**</u> (column 4, lines 33-36). Accordingly, Borrey cannot disclose a system wherein determining the sub-section delimiter comprises **a user** indicating at least one of <u>a font</u> <u>size</u> and <u>a font style</u>.

For at least the foregoing reasons, **claim 22**, as well as **claim 24**, which depends therefrom, is not anticipated and is not obvious in light of Sotomayor and Borrey.

Claim 23 recites subject matter similar to **claim 22** but further recites **a user** <u>indicating</u> a specific point coordinate within the document.

<u>The Office Action stipulates that Sotomayor does not disclose this subject matter</u> and does not even assert that Borrey discloses this subject matter. Additionally, as indicated above, <u>Borrey asserts that Borrey discloses an identification process that is</u> <u>carried out without using any human intervention</u> (column 4, lines 33-36).

For at least the foregoing reasons, **claim 23**, as well as **claim 25** is not anticipated and is not obvious in light of Sotomayor and Borrey.

Claim 26 depends from **claim 10** and recites the delimiter designator is operative <u>to accept an indication</u> of at least one of a font size and a font style as a delimiter designation. Since the Office Action stipulates that Sotomayor does not disclose a user making such a designation, it appears that the Office Action intended to stipulate that Sotomayor does not disclose a delimiter designator operative to accept an indication of a font size and a font style. Additionally, the Office Action does not assert that Borrey discloses such a delimiter designator. Moreover, Borrey alleges disclosure of an identification process that is carried out without any human intervention. Accordingly, it is submitted that Borrey does not disclose or suggest a delimiter designator such as is recited in **claim 26**.

For at least the foregoing reasons, **claim 26** is not anticipated and is not obvious in light of Sotomayor and Borrey.

Claim 27 recites subject matter similar to that recited in **claim 26** but additionally recites that the delimiter designator is operative to accept an indication of a predetermined <u>machine-readable symbol</u> and a specific point coordinate within the document as a delimiter designation. The Office Action appears to stipulate that

Sotomayor does not disclose or suggest this subject matter. Additionally, the Office Action does not assert that Borrey discloses this subject matter. Furthermore, <u>Borrey asserts that Borrey discloses an identification process **without using any special identification markings on the document**</u> or any human intervention (column 4, lines 33-36). Accordingly, **claim 27** is not anticipated and is not obvious in light of Sotomayor and Borrey.

Regarding **claims 10-13**, the Office Action stipulates that Sotomayor fails to disclose a document processor including a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition.

In this regard, the Office Action appears to rely on Borrey. However, the Office Action does not assert that Borrey discloses a document processor including a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition.

Accordingly, **the Office has not met its burden** of presenting a *prima facie* case of obviousness.

Furthermore, Borrey alleges disclosure of an identification process that is carried out without using any human intervention (column 4, lines 33-36). Accordingly, it is respectfully submitted that Borrey does not disclose or suggest a document processor that includes a delimiter designator module such as that recited in **claim 10**. The assertions made on pages 5 and 6 of the Office Action with regard to what Borrey discloses do not appear to address or assert disclosure of such a delimiter designator module. Clarification in this regard is respectfully requested.

For at least the foregoing additional reasons, **claim 10**, as well as **claims 11-13, 15-17, 26** and **27** which depend therefrom, is not anticipated and is not obvious in light of Sotomayor and Borrey.

Additionally, **there is no motivation in the art** to combine aspects of Sotomayor with aspects of Borrey. For example, as indicated above, Sotomayor relies on HTML heading-tokens (column 6, lines 8-9). It is respectfully submitted that Borrey does not disclose or suggest providing these HTML heading-tokens for paper documents.

Accordingly, <u>subject matter from Borrey cannot be combined with the subject matter from Sotomayor</u> and **such a combination would be inoperative**. Accordingly, the assertion that it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the teachings of Borrey to the teachings of Sotomayor such that paper documents can be electronically processed and stored in an organized manner to facilitate a retrieval of a document, words or section, is specious, and <u>the Office has not met its burden of presenting a *prima facie* case of obviousness</u>.

For at least the foregoing additional reasons, **claim 10**, as well as **claims 11-13, 15-17, 26** and **27** which depend therefrom, is not anticipated and is not obvious in light of Sotomayor and Borrey.

Regarding **claims 18** and **28**, the Office Action stipulates that Sotomayor fails to disclose defining a sub-section delimiter, wherein defining the sub-section delimiter includes at least one of <u>a document processor operator</u> building a sub-section delimiter from a list of predetermined potential sub-section delimiter components, <u>a document processor operator</u> entering a a sub-section delimiter through keyboard keystrokes, entering a sub-section delimiter by <u>selecting symbols</u> on a displayed portion of the electronic version of the document, and <u>designating at least one demarcation point</u> on at least one displayed portion of the electronic document to create a list of demarcation points to be used as a set of delimiter definitions, as is recited in **claim 18** and appears to rely on Borrey for this disclosure. However, none of the assertions regarding what Borrey discloses provided on pages 7 and 8 of the Office Action addresses a document processor operator building a sub-section delimiter definition or enter a sub-section delimiter through keyboard keystrokes or the other techniques recited in **claim 18**. Further in this regard, it is respectfully submitted that discussion of a system operator selecting retrieval criteria to search a database does not disclose or suggest a document processor operator building a sub-section delimiter definition for the purpose of automatically <u>generating</u> an index or table of contents or to divide a document into separate sections.

For at least the foregoing reasons, **claim 18** is not anticipated and is not obvious in light of Sotomayor and Borrey.

Furthermore, <u>there is no motivation in the art</u> to combine the subject matter of

Borrey with the subject matter of Sotomayor. As indicated above, such a combination would be inoperable because, for example, Borrey does not provide for paper documents with the HTML heading-tokens relied upon by Sotomayor. Accordingly, the motivation for combining Borrey and Sotomayor suggested by the Office Action is specious and <u>the Office has not met its burden</u> of presenting a *prima facie* case of obviousness.

Similar arguments are applicable to **claim 28**. Furthermore, Sotomayor does not disclose performing recognition functions on scanned document data to generate a recognized version of the document and <u>Borrey teaches away from using optical character recognition</u> in an automatic identification method (Abstract, lines 9 and 10; column 1, lines 61-64; column 2, lines 30-33; column 4, lines 33-36). <u>Accordingly, Sotomayor and Borrey do not disclose or suggest performing recognition functions on the scanned document data</u> to generate a recognized version of the document or performing statistical analysis on recognized characters as is recited in **claim 28**.

For at least the foregoing additional reasons, **claim 28** is not anticipated and is not obvious in light of Sotomayor and Borrey.

With regard to **claims 20** and **21**, the Office Action stipulates that Sotomayor fails to disclose scanning the document to generate scanned document data, performing recognition functions on the scanned document data to generate a recognized version of the document, and the sub-section delimiter comprises marking a paper version of the document with a least one predetermined machine-readable demarcation symbol prior to scanning the document and appears to rely on Borrey for disclosure of these elements. However, <u>Borrey teaches away from performing recognition functions</u> on the scanned document (Abstract, lines 9 and 10; column 1, lines 61-63; column 2, lines 30-33; column 4, lines 33-36). Furthermore, <u>Borrey teaches away from marking a paper version of the document with at least one predetermined machine-readable demarcation symbol</u> by highlighting the fact that Borrey allegedly discloses an identification process that is carried out **without using any special identification markings on the document** (column 4, lines 33-36). Additionally, the list of things Borrey allegedly discloses provided on pages 9 and 10 of the Office Action do not include an assertion that Borrey discloses the subject matter which the Office stipulates is not disclosed by

Sotomayor.

For at least the foregoing reasons, **claims 20** and **21** are not anticipated and are not obvious in light of Sotomayor and Borrey.

Additionally, there is no motivation in the art to combine subject matter from Borrey with subject matter from Sotomayor and such a combination would not be operable and would not arrive at the subject matter of **claims 20** and **21**.

For at least the foregoing reasons, the Office has not met its burden of presenting a *prima facie* case of obviousness and **claims 20** and **21** are not anticipated and are not obvious in light of Sotomayor and Borrey.

Furthermore, **claim 21** depends from **claim 2** and is not anticipated for at least that reason.

Claim 6 was rejected under 35 USC §103(a) as being unpatentable over Sotomayor in view of Borrey and further in view of Kuga. However, **claim 6** depends from **claim 2** and is not anticipated and is not obvious for at least that reason.

Claims 15 and **16** were rejected under 35 USC §103(a) as being unpatentable over Sotomayor in view of Borrey and further in view of Schmidt. **Claim 17** was rejected under 35 USC §103(a) as being unpatentable over Sotomayor in view of Borrey and Schmidt and further in view of Herregods. However, **claim 15** depends from **claim 10**. **Claims 16** and **17** depend from **claim 15**. Therefore, **claims 15, 16** and **17** depend from **claim 10** and are not anticipated and are not obvious in view of Sotomayor, Borrey, Schmidt and Herregods for at least that reason.

Telephone Interview

In the interests of advancing this application to issue the Applicant respectfully requests that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 2, 4-8, 10-13, 15-18 and **20-28** remain in the application. For at least the foregoing reasons, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

☒   Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	23	- 29 =	
INDEPENDENT CLAIMS	8	- 8 =	

☒   This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

☒   The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Thomas Tillander, at Telephone Number (216) 861-5582.

Respectfully submitted,

FAY SHARPE LLP

10/23/08

Date

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